Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Advanced Television Systems	)	
and Their Impact Upon the	)	MM Docket No. 87-268
Existing Television Broadcast	)	
Service	)	

TO: The Commission

COMMENTS OF MOUNTAIN STATES BROADCASTING, INC.

Mountain States Broadcasting, Inc., licensee of KMSB-TV, Channel 11, Tucson, Arizona ("KMSB-TV") submits these comments in response to the Sixth Further Notice of Proposed Rulemaking (FCC 96-317, released August 14, 1996) ("Notice"). KMSB-TV commends the Commission for proposing to allot and assign digital television ("DTV") channels in a manner that is based on full accommodation and sound engineering principles. Moreover, we agree with the Notice's recognition that the transition to DTV must be dynamic. The Notice, for example, recognizes that some stations may not be able to collocate or that others will prefer different channel assignments. The Notice also proposes to employ an industry coordination committee to consider and to evaluate station requests for facility and channel changes. Amendments, in short, will be inevitable, necessary, and consistent with the public interest.

KMSB-TV may face a unique problem that could require fine-tuning of the DTV table of allotments and assignments. KMSB-TV may not be able to replicate is existing service if it broadcasts in the digital environment from its current site of Mt.

Hopkins. There are several factors that have led KMSB-TV to this conclusion. First, there exists a large ridge to the north of the transmitter site on Mt. Hopkins, the terrain effects of which may impede KMSB-TV from reaching its core area of viewers in the Tucson area. In addition, preliminary review of KMSB-TV's situation by its engineering consultant suggests that indoor receiving antennas and multi-path effects, compounded by the "cliff effect" of DTV, may pose a threat to KMSB-TV's service.[1/] Unfortunately, KMSB-TV cannot overcome any difficulties it may encounter by increasing the height of the DTV tower or by relocating the tower elsewhere on Mt. Hopkins because of the restrictions imposed by the nearby Smithsonian Institution's Fred Lawrence Whipple Observatory and by the National Forest Service.

Because of limited testing of DTV operations in a real world environment, KMSB-TV cannot conclusively quantify the extent to which its service will suffer if it continues to broadcast in the digital mode from Mt. Hopkins. KMSB-TV therefore is not at this time asking the Commission for relief. KMSB-TV is instead filing these comments to alert the Commission of these unique circumstances. In the event tests confirm a loss of service if KMSB-TV broadcasts digitally from Mt. Hopkins, KMSB-TV may need to relocate its DTV tower approximately 45 miles away at Mt. Bigelow, the existing site of three other full-service Tucson TV stations and the proposed site of their DTV operations. To avoid a loss of service to a significant, and growing, number of

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[1/] The well-known "cliff effect" of DTV makes broadcasting in the digital environment very different from providing NTSC service. Whereas KMSB-TV is capable of putting an NTSC signal into many Tucson-area homes that is weak, but nevertheless receivable, a DTV signal that falls below a certain level becomes entirely unreceivable.

households in KMSB-TV's core service area, KMSB-TV would request that the Commission adjust the DTV table to pair NTSC Channel 11 with a DTV channel located at Mt. Bigelow. KMSB-TV would comply with Commission procedures established for addressing modifications to DTV channel assignments and facilities. Furthermore, KMSB-TV would continue to comply with current NTSC requirements regarding Nogales by providing Nogales-oriented programming and a Nogales auxiliary studio and by ensuring that excellent service is maintained to its Nogales viewers through the means of a booster or satellite.[2/]

I. THE FCC AND CHANNEL 11 LICENSEES HAVE WORKED TOGETHER TO ENABLE THE STATION TO SERVE THE TUCSON MARKET.

The FCC originally allocated Channel 11 to the very small community of Nogales located on the Mexican border approximately 61 miles from the city of Tucson, the heart of the television market in the region. After beginning operations in 1967 and facing the prospect of continuing financial losses unless it could be identified with Tucson, the then-Channel 11 licensee petitioned the FCC in 1970 to make Channel 11 a hyphenated Tucson-Nogales allotment. The FCC agreed that the station's viability depended on its ability to compete in the Tucson television market and concluded that the station should have the opportunity to make Tucson its community of license if the station could sufficiently improve its technical facilities to provide city-grade service to Tucson. In granting the hyphenated allotment, the FCC imposed a condition that Channel

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[2/] The city-grade service requirement that currently applies to KMSB-TV's NTSC operations, as discussed *infra*, is inapplicable in the DTV environment because of the cliff effect.

11 should continue to air some Nogales-oriented programming, maintain a Nogales auxiliary studio, and provide city-grade service to Nogales (after approval of a change in community of license to Tucson).[3/]

Channel 11 was still suffering financial losses when KMSB-TV acquired the station in 1985. In an effort to make the station a viable competitor in the Tucson market, KMSB-TV promptly obtained FCC consent to improve its technical facilities to the maximum power and height permitted at the Mt. Hopkins site. Mt. Hopkins is located 24 miles from Nogales and 35 miles from Tucson.[4/] And, in 1987, KMSB-TV obtained the right to broadcast programming from the fledgling Fox Television Network. In 1990, the FCC granted KMSB-TV's request to make Tucson Channel 11's community of license (without modifying the Nogales service conditions), noting that its rulemaking 20 years earlier anticipated the eventual shift to Tucson and that the action would place the station on a more competitive footing with other Tucson television stations.

II. BROADCASTING FROM MT. HOPKINS IN THE DIGITAL ENVIRONMENT MAY RESULT IN A SUBSTANTIAL LOSS OF SERVICE.

The Notice recognizes that a cornerstone principle for the transition to DTV will be the ability of stations to replicate existing service areas, thereby preserving viewer access to free over-the-air television. Notice at 8. The Notice thus proposes to provide all existing broadcasters with DTV assignments that will replicate service

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[3/] See TV Table of Assignments (Nogales and Tucson), Docket No. 19075, 32 F.C.C.2d 885 (1972); 47 C.F.R. § 73.606 n.2.

[4/] KMSB-TV operates at a tower height of 187-feet above ground and 507 meters above average terrain at 316 kW effective radiated power. It also operates translator station K23CD located at Mt. Bigelow to provide fill-in service to Tucson.

comparable to existing NTSC service areas. Id. at 7-8, 38-39. (Indeed, the Notice also encourages stations to increase their DTV coverage areas when such augmentation would not create additional interference to neighboring stations. Id. at 8.) As broadcasters have long advocated, and as the Notice acknowledges, the principles of replication and, to the extent possible, maximization, serve the interests of both the public and broadcasters. These principles will minimize viewer disruption and ensure broadcasters that they can continue to reach the viewers on which their broadcasting service depends. Id.

Furthermore, as the Notice acknowledges, the transition to DTV will be a "dynamic process" and mechanisms must be in place to accommodate the "inevitable changes that will occur." Id. at 19. Some stations will be required to seek facility changes in response to new information about the viability of planned DTV facilities, while still others will seek channel changes for individual market reasons. The Notice recognizes this facet of the DTV transition by proposing to allow flexibility in transmitter location; considering negotiated allotments and assignments; and by planning to adopt the broadcasters' proposed industry coordinating committees. Id. at 19-21, 23, 44.

KMSB-TV is one station that may require a change of its DTV assignment. The Notice tentatively proposes DTV Channel 14 for KMSB-TV and projects that, broadcasting from Mt. Hopkins on DTV Channel 14, KMSB-TV can achieve 99.7% replication of its existing NTSC service area. There are, however, several factors uniquely associated with broadcasting in the digital environment from Mt. Hopkins that suggest KMSB-TV may *not* be able to reach a substantial number of its existing viewers, particularly those in its growing core service area.

First, there is a significant geographic obstacle on Mt. Hopkins that could prevent DTV replication. In particular, a large ridge located in the vicinity and north of the transmitter site in the direction of KMSB-TV's core area of viewers in the Tucson area may be a formidable source of reflections or multi-path problems. See Appendix A at 3 and Figure 1. Even a relocation to another site on the mountain may not enable KMSB-TV to overcome the effects of the ridge.[5/]

Second, there are several technical issues, untested in the digital arena, which may undermine KMSB-TV's ability to replicate its NTSC coverage. As discussed in the attached Technical Statement of John A. Lundin of du Treil, Lundin & Rackley, Inc., KMSB-TV viewers may not be able to receive the DTV signal because of the use of indoor receiving antennas and the combined effects of the ridge located to the north of the transmitter, the use of a UHF DTV channel (instead of a VHF channel), and the so-called "cliff effect." See Appendix A at 2-4. KMSB-TV has serious concerns that the building penetration of its DTV signal may not be sufficient to reach viewers in Tucson and Nogales with indoor antennas. Moreover, if KMSB-TV receives a UHF DTV channel, as proposed by the Broadcasters and the Notice, KMSB-TV anticipates multi-path problems from a number of sources beyond Mt. Hopkins. Id.[6/]

[5/] KMSB-TV recognizes that the Notice proposes to provide some flexibility for transmitter site relocations by permitting broadcasters to locate their DTV facilities at any site within a three-mile radius of their actual transmitter sites, without prior FCC approval and as long as the broadcasters continue to serve their communities of license. See Notice at 23.

[6/] KMSB-TV also has grave concerns with the Notice's tentative assignment of DTV Channel 14. As the Broadcasters point out in their joint comments, the FCC table assigns

(continued...)

KMSB-TV has not overlooked facility modifications that might compensate for the anticipated problems associated with broadcasting digitally from Mt. Hopkins. Unfortunately, such a course of action is not available to KMSB-TV. To increase the height of its existing 187 feet tower at Mt. Hopkins, KMSB-TV must obtain the approval of its landlord, the National Forest Service, as well as the neighboring Smithsonian Institution's Fred Lawrence Whipple Observatory before seeking the required Federal Aviation Administration clearance. Under FAA requirements, an increase in the height of the Channel 11 tower would require the addition of lights. See, e.g., 47 C.F.R. Part 17, Subparts B and C. The National Forest Service has rejected Mountain State's request to modify the tower. See Appendix B. According to the Forest Service, the Coronado National Forest Land and Resource Management Plan requires that new and replacement towers be below the height for which the FAA requires lights due to "'interference with the fire lookout tower and aesthetics.'" Id.

Further, the Fred Lawrence Whipple Observatory has given KMSB-TV notice that it would oppose an increase in the tower. See Appendix C. The Observatory conducts its operations from a location just 2.5 miles from the tower site. Because these operations are highly sensitive to exposure to light from other sources, the Observatory will oppose a taller, lighted tower. Id.

[6/](...continued)
some channels too close to adjacent or co-channels across the Mexican border. KMSB-TV has one of these channels. We urge the Commission to reevaluate the assignment of Channel 14 to KMSB-TV and to adopt the Broadcasters' approach to allotting and assigning channels to stations on the Mexican border. The Providence Journal Company, owner of KMSB-TV, is a signatory to the Broadcasters' Comments.

If the results of additional experience in real-world propagation confirm that KMSB-TV will be unable to replicate existing service from Mt. Hopkins in the digital environment, KMSB-TV at that time would return to the Commission and request that, for the purposes of DTV service only, its transmitter be designated at Mt. Bigelow, with a Tucson designation.[7/] From Mt. Bigelow, KMSB-TV may be able to reach its growing, core service area. During the DTV transition period, KMSB-TV would meet the Nogales conditions in the NTSC Table of Allotments for NTSC Channel 11 by continuing, as before, to broadcast on Channel 11 from Mt. Hopkins. Our existing viewers in the Tucson and Nogales communities therefore would receive uninterrupted service until NTSC service is phased out.

At the end of the transition period, the conditions on NTSC Channel 11 would expire. Nevertheless, KMSB-TV would continue to provide Nogales-oriented programming and a Nogales auxiliary studio. Moreover, although the city-grade principle does not apply in the digital environment, KMSB-TV would propose to supplement its service to Nogales through the use of a booster or satellite operation. We would comply with Commission procedures regarding modifications following the adoption of the DTV table and would expect to submit any request for providing DTV service through such means to the established industry coordinating committees.

[7/] Currently, three full service stations operate from a site on Mt. Bigelow which is located approximately 20 miles northeast of Tucson, and three full service stations operate from sites in the Tucson Mountains west of Tucson.

CONCLUSION

The transition to DTV service, although exciting and necessary, will require an estimated $8-10 million investment by KMSB-TV. The station cannot afford to make this transition only to lose its viewers in its growing core service area. If broadcasting digitally from Mt. Hopkins results in the loss of these viewers, KMSB-TV likely will face severe economic hardship, not unlike that faced by Channel 11 in the late 1960s. We run the risk of ultimately going dark in the digital era. As the Commission noted in 1972, "this result would be unfortunate both for [Channel 11] and the viewers of [Channel 11] in Nogales." 32 F.C.C.2d. at 887. KMSB-TV will look to experience with real-world propagation to confirm whether it can provide DTV service to its viewers from Mt. Hopkins. In the meantime, KMSB-TV submits these comments to register its concerns with the Commission and to provide it with advance notice of KMSB-TV's circumstances.

Respectfully submitted,

MOUNTAIN STATES BROADCASTING, INC.

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Its Attorneys

November 22, 1996

du Treil, Lundin & Rackley, Inc.
A Subsidiary of A.D. Ring, P.A.

TECHNICAL STATEMENT
SUPPORTING THE COMMENTS OF
MOUNTAIN STATES BROADCASTING, INC.

This Technical Statement has been prepared on behalf of Mountain States Broadcasting, Inc., licensee of station KMSB-TV on channel 11 at Tucson-Nogales, Arizona. The statement supports the KMSB-TV comments in response to the Federal Communications Commission (FCC) 6th Further Notice of Proposed Rule Making (FNPRM) in MM Docket No. 87-268. The FNPRM concerns advanced television systems and their impact upon the existing television broadcast service. The FCC has proposed a digital television (DTV) allotment process in the notice.

According to the FCC's TV database, station KMSB-TV is licensed to operate with a directional antenna system from a site on Mount Hopkins, approximately 57 kilometers (35 miles) south of the Tucson reference point. The station operates with a maximum visual effective radiated power (ERP) of 316 kilowatts (kW). The power for the current NTSC operation is peak power. The antenna height above average terrain (HAAT) is 507 meters (1663 feet). The KMSB-TV directional antenna pattern is severely suppressed generally to the east (-25.5 dB) in order to protect the Smithsonian Institution's Fred Lawrence Whipple Astrophysical Observatory.

The FCC has proposed channel 14 as KMSB-TV's DTV allotment. The allotment is proposed for KMSB-TV's present site on Mount Hopkins. The FCC has proposed a DTV ERP of 1635.2 kW (average power). The current antenna HAAT (507 meters) is assumed for the

proposed channel 14 DTV allotment. The Broadcast Caucus (BC) has proposed channel 34 for KMSB-TV in its modified table, with a DTV ERP of 710.3 kW (average).

Tucson is the primary television market for the area in which KMSB-TV is located. Because of the separation from Tucson imposed on the NTSC operation of the station, KMSB-TV is concerned about its proposed DTV operation. Figure 2 is a topographic map showing the present KMSB-TV transmitter site and the location of the other stations. The cities of Tucson (north) and Nogales (south on the Mexican border) are also shown in Figure 2.

All of the Tucson full service and low power television (LPTV) stations are either located near Mount Bigelow or the Tucson Mountains. Mount Bigelow is approximately 29 kilometers (18 miles) northeast of the Tucson reference point. The Tucson Mountain site is approximately 18 kilometers (11 miles) west of Tucson. By contrast, station KMSB-TV at Mount Hopkins is approximately 57 kilometers (35 miles) south of Tucson. Station KMSB-TV is twice as far from Tucson as the Mount Bigelow TV stations, and more than three times as far as the Tucson Mountain TV stations. Because of its greater distance from the market, and the problems caused to its reception by receiver antenna orientation discrimination, KMSB-TV's NTSC operation on channel 11 has been handicapped.

KMSB-TV asked this firm to look into the nature of the DTV service that could be provided by KMSB-TV from Mount Hopkins. Although additional experience with real-world propagation is required for us to draw firm conclusions, we have identified several factors which suggest that Mount Hopkins may not be a suitable site from which to broadcast in the digital environment. First, with DTV, reception is considered perfect or non-existent. Because of this "brick wall" or "cliff" effect of DTV versus a degraded picture with

NTSC, we are concerned with KMSB-TV's proposed DTV coverage to Tucson. Both the FCC and BC propagation models for DTV are based on the use of outdoor receiving antennas. This is not the situation in urban Tucson. At this time there is insufficient information from field testing to determine what the building penetration effects are on the DTV signal, and how receivable it is on sets connected to indoor receiving antennas.

Figure 1 is a portion of the USGS topographic map showing the present transmitter site, the topography within 3 miles of the current site, and the Smithsonian Observatory (about 2.5 miles east-southeast of the KMSB-TV site). It is believed there is no other site within 3 miles which will provide a more favorable propagation path into both Tucson and Nogales, and which will not conflict with the Observatory.

Figure 1 shows a ridge called Pete Mountain located just north of the present KMSB -TV site. The ridge runs generally from due north to northeast of the present site. The impact of this ridge on service to Tucson is a concern for KMSB-TV. Unfortunately, higher tower height is not an option for KMSB-TV at Mount Hopkins because it will require lighting from the Federal Aviation Administration (FAA), which will be opposed by the National Forest Service (site landlord) and the Smithsonian Observatory. Because of the current radiation limits placed on KMSB-TV by the Observatory, higher power may present a problem. It is not known whether the Observatory will permit the proposed UHF DTV operation at the present KMSB-TV site on Mount Hopkins. Even if the addition of a UHF DTV operation is permitted, it is unknown what degree of suppression will be required to protect the Observatory, and subsequently what practical UHF DTV facility can be achieved. Finally, it is commonly known that there is more attenuation with UHF propagation, and more susceptibility to multi-path problems

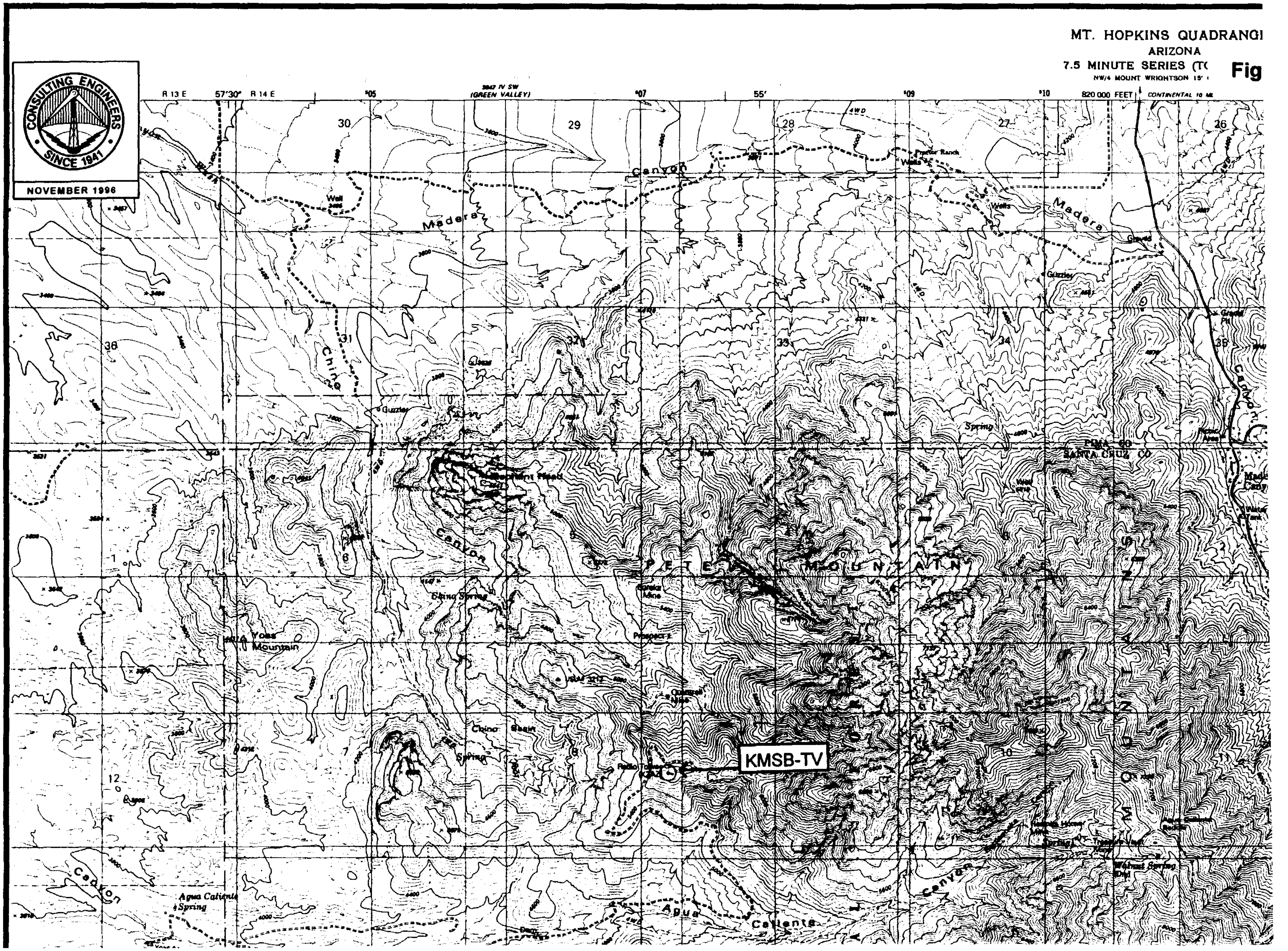
(reflections). The effects of terrain are more severe at UHF. All of these factors are concerns for KMSB-TV, and for which there is insufficient information at this time for KMSB-TV to make a decision with regard to the proposed DTV operation.

As is evident from Figures 1 and 2, Mount Hopkins is basically the only site for KMSB-TV to locate and provide NTSC service to both Nogales and Tucson. The present site, however, may not be suitable for providing DTV service to both cities. It is believed KMSB-TV's DTV operation should be at Mount Bigelow with the DTV allotments for several of the other Tucson TV stations. KMSB-TV DTV service would then be provided to Nogales through the use of a booster or satellite operation. Unfortunately, we are not able to adequately demonstrate this position at this time because of the limited experimental and field test information available concerning DTV operations. Station KMSB-TV plans to re-address this matter when sufficient DTV information is available.

John A. Lundin

du Treil, Lundin & Rackley, Inc.
240 N. Washington Blvd.
Suite 700
Sarasota, FL 34236
(941) 366-2611

November 19, 1996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Chino Basin
Spring
Agua Caliente
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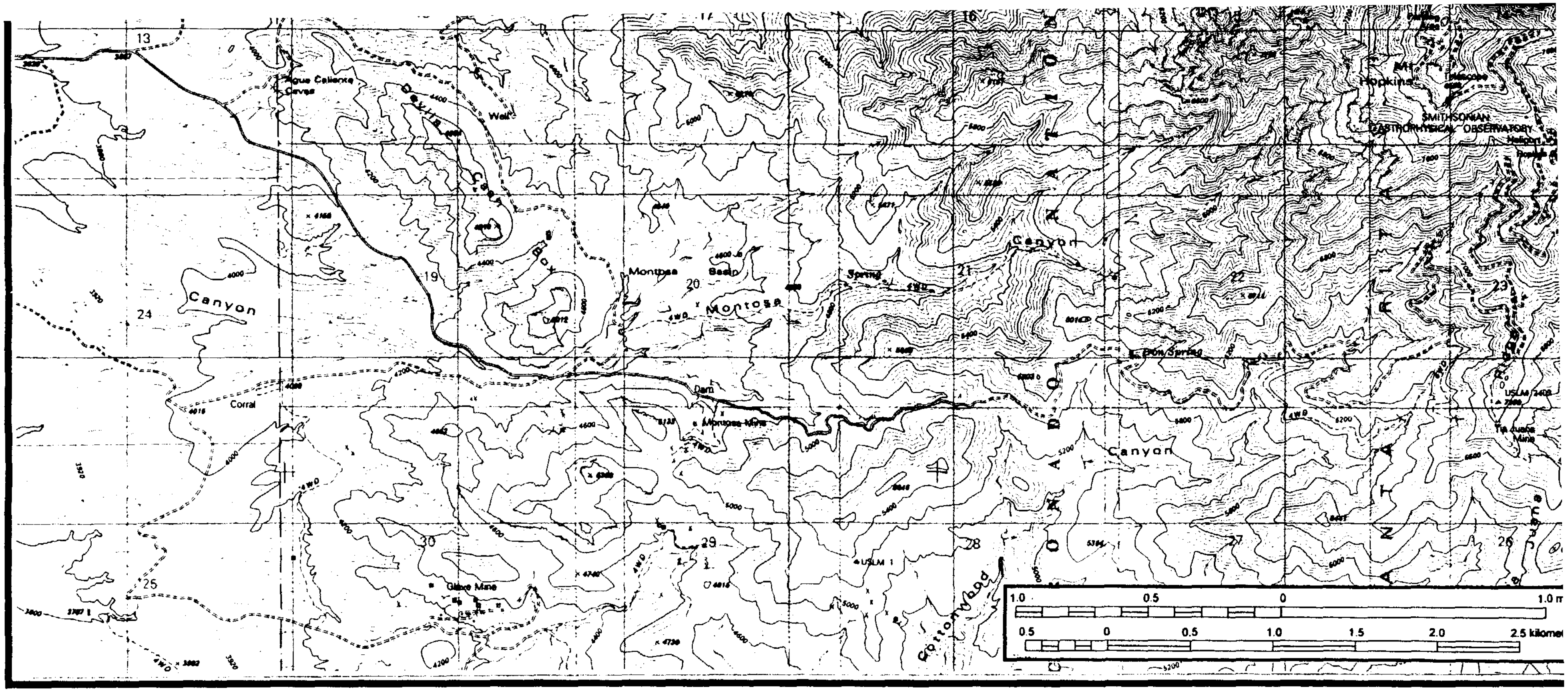
Canyon
Vosa Mountain
PETE MOUNTAINS
Proctor Ranch
Wells
Well
Guzzler
Radio Tower
Prospect
PIMA CO
SANTA CRUZ CO
KMSB-TV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Well
Canyon
Corral
Box
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Glove Mine
Mt. Hopkins
SMITHSONIAN ASTROPHYSICAL OBSERVATORY
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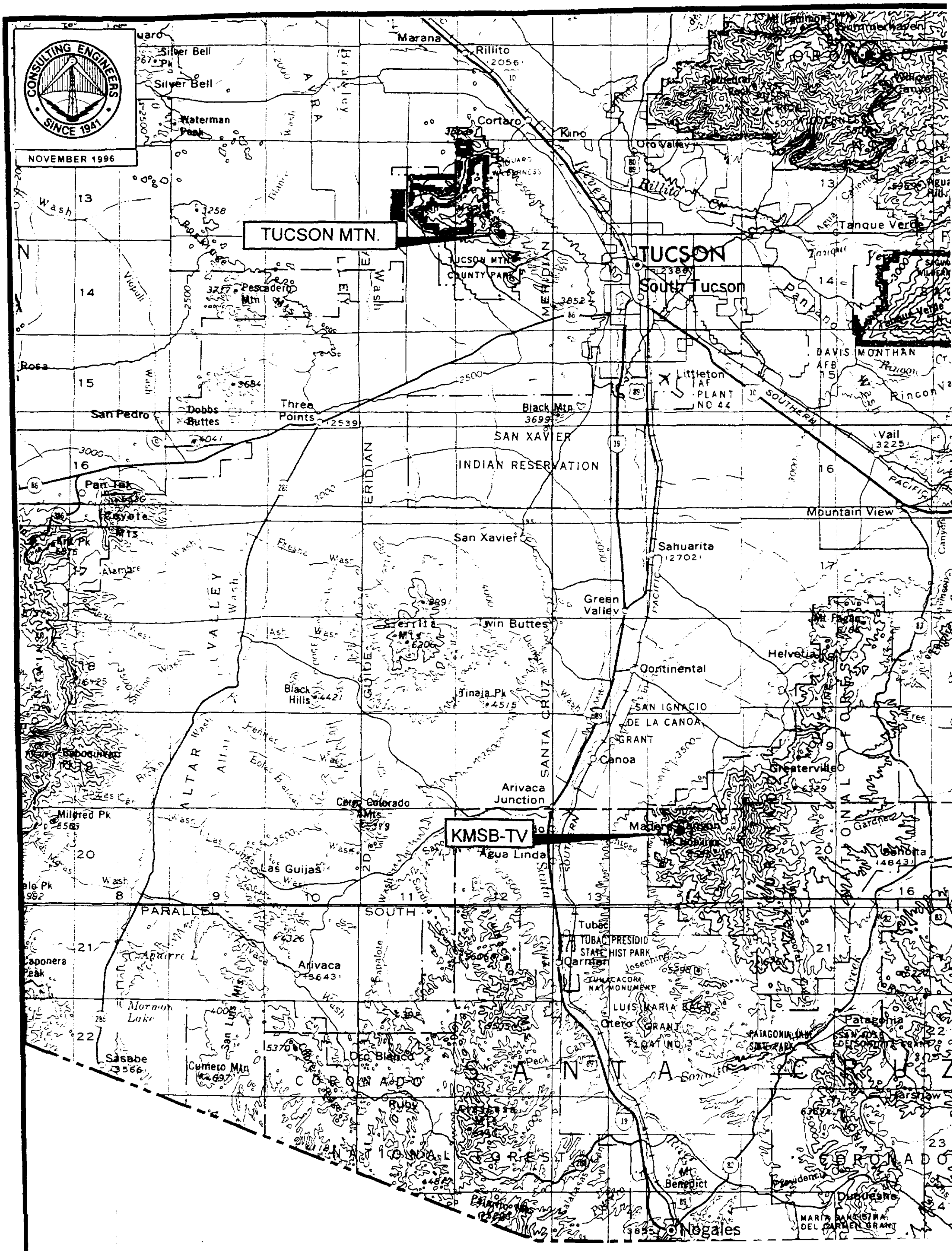
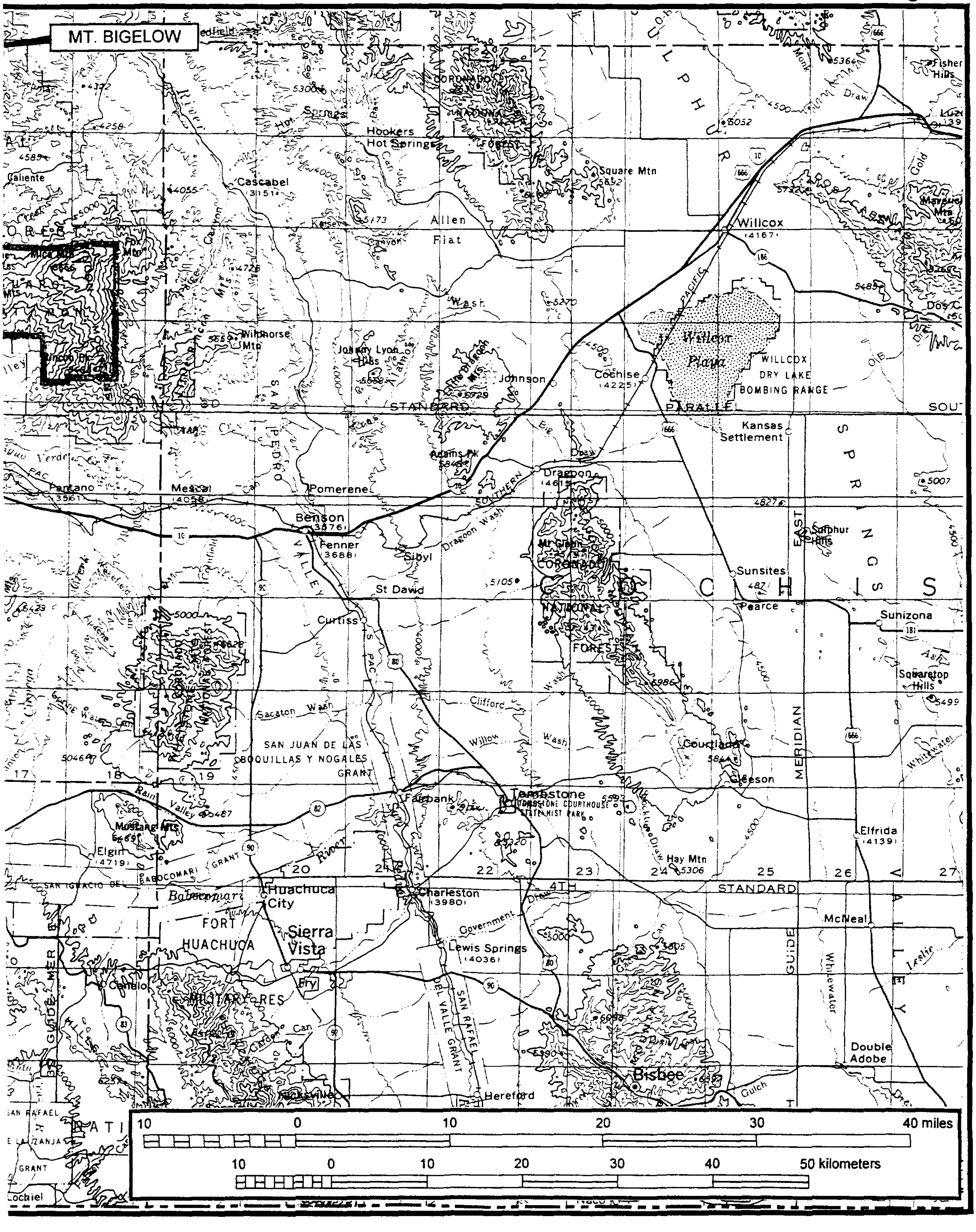

CONSULTING ENGINEERS
SINCE 1941
NOVEMBER 1996
TUCSON MTN.
KMSB-TV
TUCSON
South Tucson
Marana
Rillito
Cortaro
Kino
Oro Valley
Silver Bell
Waterman Peak
Pescadero Mtn
Tucson Mtn County Park
Tanque Verde
Davis Monthan AFB
Littleton
AF PLANT NO 44
Rincon Va
Three Points
San Pedro
Dobbs Buttes
Black Mtn
SAN XAVIER
INDIAN RESERVATION
Vail
Mountain View
Pan Tak
Coyote Mts
Kitt Pk
San Xavier
Sahuarita
Green Valley
Twin Buttes
Sierrita Mts
Black Hills
Tinaja Pk
Continental
Helvetia
SAN IGNACIO
DE LA CANOA
GRANT
Canoa
Greaterville
Arivaca Junction
Cerro Colorado Mts
Agua Linda
Las Guijas
Mildred Pk
Sonoita
PARALLEL
SOUTH
Tubac
TUBAC PRESIDIO
STATE HIST PARK
Carmen
TUMACACORI NAT MONUMENT
LUIS MARIA BACA
Otero
FLOAT NO 3
Arivaca
Sasabe
Oro Blanco
Cumero Mtn
Ruby
CORONADO
SANTA CRUZ
Patagonia
Patagonia Lake State Park
Mt Benedict
Duquesne
Nogales
MARIA SANTISIMA DEL CARMEN GRANT
ALTAR VALLEY
AVRA VALLEY
GUIDE MERIDIAN
SANTA CRUZ MERIDIAN
SOUTHERN PACIFIC

Figure 2



MT. BIGELOW
Hookers Hot Springs
Cascabel
(3151)
Allen Flat
Square Mtn
Willcox
(4167)
Wildhorse Mtn
Johnny Lyon Hills
Johnson
Cochise
(4225)
Willcox Playa
WILLCOX DRY LAKE BOMBING RANGE
STANDARD
PARALLEL
Kansas Settlement
Adams Pk
Dragoon
(4615)
Pantano
(3561)
Mescal
(4058)
Pomerene
Benson
(3576)
Fenner
(3688)
Sibyl
Dragoon Wash
St David
Sulphur Hills
Sunsites
Pearce
Sunizona
Curtiss
CORONADO NATIONAL FOREST
SAN PEDRO VALLEY
Clifford
Sacaton Wash
Willow Wash
SAN JUAN DE LAS BOQUILLAS Y NOGALES GRANT
Squaretop Hills
Courtland
Gleeson
EAST MERIDIAN
Fairbank
Tombstone
TOMBSTONE COURTHOUSE STATE HIST PARK
Elfrida
(4139)
Mustang Mts
Elgin
(4719)
BABOCOMARI GRANT
Hay Mtn
4TH STANDARD
Huachuca City
Charleston
(3980)
FORT HUACHUCA
Sierra Vista
Government
McNeal
Lewis Springs
(4036)
Canelo
MILITARY RES
SAN RAFAEL DEL VALLE GRANT
GUIDE MERIDIAN
Double Adobe
Bisbee
Hereford
10 0 10 20 30 40 miles
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United States Department of Agriculture | Forest Service | Coronado National Forest | Nogales Ranger District
303 Old Tucson Road
Nogales, AZ 85621
(520) 281-2296
FAX (520) 670-5075

FILE AT: 2700

DATE: September 4, 1996

MR. ROY MITCHELL
FOX 11 - KMSB-TV
1855 NORTH 6TH AVENUE
TUCSON, AZ 85705-5661

DEAR MR. MITCHELL:

Your request to modify/replace your current tower located at the Elephant Head Electronic Communication Site is hereby denied. Denial is based on Standards and Guidelines in the Coronado National Forest Land and Resource Management Plan (LMP).

Coronado National Forest LMP states on page 42, item 1 "New and replacement antennas and towers will be below the height for which the FAA requires lights because of the interference with the fire lookout tower and aesthetics."

Please contact me if you have questions or require additional information.

Lydia Doan
Special Uses Officer

SMITHSONIAN INSTITUTION
ASTROPHYSICAL OBSERVATORY

FAX
602/670-5713
PUBLIC INFORMATION
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BUSINESS
602/670-5701

FRED LAWRENCE WHIPPLE OBSERVATORY

August 19, 1996

Mr. Ken Middleton, President
Mountain States Broadcasting, Inc.
Providence Journal Broadcasting, Inc.
1844 North Sixth Avenue
Tucson, Arizona 85705-5601

Reference: Mountain States Broadcasting letter dated 7/31/96

Dear Mr. Middleton:

Your questions are listed below along with the Fred Lawrence Whipple Observatory (FLWO) responses.

Question 1: First, in order for us to obtain FAA clearance for a 500-foot tower it would almost certainly have to be lighted in accord with typical FAA requirements that would call for a flashing top beacon and constant burning obstruction side lights. The current KMSB-TV tower is unlighted because it does not exceed 200 feet in height. You have previously indicated that because of the sensitivity of your operations to light from other sources, you would oppose FAA-sanctioned lighting of this intensity so close to the observatory. Does this continue to represent your position?

Answer: Yes

Question 2: Second, would you find it acceptable for us to operate our DTV-UHF channel at the higher power of 1280 kw at the present tower location, either at the proposed 500-foot height or the current 200-foot tower height? Such an operation could result in a power level at the Observatory which is no greater than the current operation.

Answer: Fred Lawrence Whipple Observatory will oppose any transmitter that produces a field strength greater than 4 millivolts/meter measured anywhere in the Observatory withdrawal. Transmitters producing fields exceeding 4 millivolts/meter might be acceptable provided a switch is available to turn the transmitter off. FLWO would have complete control of this switch and would turn off the transmitter when it might cause interference with Observatory operations.

Channel 11 has coexisted with FLWO for thirty years. FLWO would like to find a way to continue this coexistence while at the same time protecting the significant government

investment at FLWO. FLWO must oppose a lighted tower. FLWO might, however, consider proposals involving higher KMSB power. Before FLWO can consider requests for higher power, KMSB must submit measurements of the current field strength and the KMSB anticipated power levels at various points within the Observatory Withdrawal.

Yours truly

Steve Criswell
Program Manager

c: Foltz
Huchra